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ABSTRACT

Reminiscence has long been considered an integral part of the aging process, whether as a form of cultural transmission or as a method of strengthening the ego structure. To examine the form of reminiscence defined as life review and its relationship to adjustment in the final stages of development, older Canadian adults (N=82) completed a reminiscence questionnaire, the Life Satisfaction Index Z, the Subjective Senescence Scale, and a life events questionnaire. Results confirmed that the elderly engaged in life review as a way of adjusting to aging, and when the review was successfully completed, reminiscence became less frequent. Concerning the relationship between ego-integrity and life review activity, the data showed marked negative affect during the course of the review, measured by life satisfaction indices and less present and future orientation. The findings suggest that levels of anxiety may rise during the review process and that ego-integrity may not appear until completion of the review. (JAC)

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REMINISCENCE AND ITS RELATIONSHIP TO THE
PSYCHOLOGICAL ADJUSTMENT OF THE ELDERLY

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Does the remembrance of things long past serve as an adequate adjustment mechanism for the stresses of the aging process, or is it merely symptomatic of the disengagement of the elderly from things now present? The prevalence of reminiscence behaviour among the aged is well documented (e.g. Lieberman & Falk, 1971; Pincus, 1970) and it has long been considered an integral part of the aging process (Buhler, 1935), whether as a form of cultural transmission via anecdotes or as a method of strengthening the ego structure (Cameron, 1972; Neugarten, 1964; Romaniuk, Note 1). The present research, however is not concerned with the multifunctional aspects of reminiscence, nor its changes in function across age-groups (Havighurst and Glasser, 1972), but with that form of reminiscence behaviour defined by Butler (1963) as life-review, and its relationship to adjustment in the final stages of development.

Butler theorizes that life review processes play a critical role in the adjustment or non-adjustment of the elderly to the aging process. He postulates that frequency of reminiscence activity increases in early aging because reminiscence provides the material for the life review processes which are characterized by 'the progressive return to consciousness of past experiences, and , particularly the resurgence of unresolved conflicts; simultaneously and normally, these revived experiences and conflicts can be surveyed and reintegrated. ' (Butler, 1963, p66). For

Butler, life review is a natural and unavoidable developmental process triggered by the awareness of approaching death independently of other personal or environmental factors. It involves the restructuring as well as the revival of the past. This type of re-organization and reworking as an ego-defence mechanism is not new as a concept (Rapaport, 1961).

Butler feels that the support given by the environment may be a major factor in the success or failure of the review. If the environment is supportive, and mainly crisis-free, then the review is a time when old conflicts are resolved, old antagonisms laid to rest, and the personality is revitalized and finalized in preparation for death. However, if the environment is not supportive, or the life experience has been mainly negative, then old guilts, failures and regrets may overwhelm the reviewer. This will result in maladaptation and possibly suicide.

From a more developmental perspective Erikson (1950) provided an eight stage model of human development, which had central to its final stage an evaluation of the individual life event. The purpose of this evaluation was the development of ego-integrity which was achieved by acceptance of the individual life event in its entirety, 'to accept one's one and only life cycle as something that had to be, and , by necessity permitted of no substitution.'

(Erikson, 1950, p268). If the life event is not accepted in total, then despair is the predicted outcome.

Erikson sees success in the life review as mainly dependent upon the personality development in previous life stages. If the personality involved in the review had a prior history of poor adjustment, then the review might not be successful. Obviously the perception of a pattern and meaning in life as sought by the Butlerian life review would greatly increase the chances of a successful outcome.

Attempts to investigate some aspects of the life review process with reference to both Butler's and Erikson's theories have led to contradictory findings. Lieberman and Falk (1971) report that there is more reminiscence activity among individuals on the waiting list for accommodation than among individuals in more stable environments, which they interpret as a response to stress (see also Lewis, 1971). However, they found no subsequent relationship between adaption to stress and frequency of and involvement in reminiscence activity. This result might be due, in part, to their definition of adaption which was measured by 15 physiological indices.

Both Havighurst and Glasser (1972) and McMahon and Rhudick (1967) found a correlation between frequency of reminiscence, the positive affects of reminiscence, and

adjustment. They defined adjustment as social-personal adjustment or freedom from depression respectively. Findings such as these have led to the recommendation of reminiscence activity as an intervention therapy (e.g. Reedy & Birren, Note 2). While the observation of the positive affect would confirm the facilitatory effects of reminiscence, it is not clear that such an affect is predicted by either the Butlerian or the Erikson model. Boylin, Gordan and Nehrke (1976) found negative affect correlated with frequency of reminiscence activity, while nevertheless frequency of reminiscence correlated positively with ego-integrity scores. They interpret the negative affect as evidence that a life review of the Butlerian type is in process.

Cameron (1972) suggests that the relationship between reminiscence and adaption may be a function of the type of life experience, and that individuals with negative life experiences will be more in need of the process of reintegration. Certainly, a large part of the Havighurst and Glasser sample were drawn from Who's Who and the past faculty of George Williams College, in contrast to the Boylin study where the subjects were institutionalized veterans. If success in life is considered a predictor of positive life experiences, the subjects in the former study should feel more satisfied with their life review than the subjects in the latter.

Thus, while Butler clearly defines the life review process and the role of the concurrent reminiscence activity, the temporal relationship between the process and its outcome seems to need clarification. Does integrity occur only when the process is complete, or does it develop during the process and possibly facilitate it? If integrity does develop during the process then the expectation would be that life satisfaction would tend to correlate positively with frequency of reminiscence activity. If, however, integrity develops upon completion of the review process then the expectation would be that life satisfaction would show little correlation with review behaviour, or would correlate negatively. The present study looks at frequency of reminiscence behaviour and adjustment, and includes a functions of reminiscence scale, since there is no reason to assume that frequency of reminiscence alone is a valid indicant of life review behaviour.

Butler further predicts that following upon the successful attainment of ego-integrity, reminiscence activity will decline, since it will no longer be required to drive the life review process. The present study was interested in establishing whether this decline in reminiscence activity would be observed among the older subjects (75+) where it would be most expected to occur. It is implicit in the theory, however, that if the review process is not successful, then reminiscence activity will

continue indefinitely seeking resolution. This means that not all persons in late adulthood would be expected to show decreased reminiscence activity for the purposes of life review.

Given the emphasis by Lewis(1971) and Lieberman and Falk (1971) on stress adaption, the present study also investigated whether the life review process is really triggered only by an increased awareness of mortality and distance from death, or whether a serious negative life crisis can result in life review as part of the adjustment to stress process. Accordingly, the study examined the relationship between frequency of reminiscence and negative life events in general.

Method

Subjects

A total of 82 non-institutionalized residents of Toronto took part in the study. These subjects were divided into two groups by age as suggested by Neugarten (1975). All participants aged 75 and over were labelled old-old. There was a total of 45 subjects in this group, 13 of which were male and 32 of which were female. Participants under 75 were labelled young-old. There was a total of 37 subjects in this group, 10 of which were male and 27 of which were female. The ages ranged from 59 to 94, with a mean age of 75.57. The majority of the subjects (69) were drawn from an apartment complex for senior citizens. The remaining

subjects were drawn from senior citizen groups.

Interviewers

There were three paid interviewers, all of whom had previous experience interviewing and some experience with the age group involved. All of the interviewers were over the age of 28. Each interviewer took part in a two hour training session focusing on the administration of the measures in use in the study.

Measures

There were four measures used in the study.

1. Reminiscence Questionnaire

The reminiscence questionnaire contained three scales and was constructed by the second author in a pilot study. The three scales were: 1) a frequency of reminiscence scale (seven items); 2) a frequency of present and future thought scale (nine items); and 3) a functions of reminiscence scale (eight items). Since frequency of reminiscence does not necessarily imply life review, the eight function items were included to determine the purpose of the reminiscence behaviour. Given previous research (e.g. Neugarten, 1964) it would be expected that reminiscence would be multifunctional in the main for both groups. The frequency of present and future thought scale was included to establish whether those subjects showing a high frequency of reminiscence behaviour were also occupied with the present and future. A qualitative aspects of reminiscence scale was included in the study (seven items) but was deleted prior to

the analysis since upon reflection the type of question involving quantifiers (e.g. do you recall mostly important or unimportant events from the past ?) seemed to require more than average self-analysis on the part of the subject without supplying information pertinent to the investigation.

2. Life Satisfaction Index Z

This measure was included as one index of psychological adjustment. The Life Satisfaction Index Z (Wood, Wylie & Sheafor, 1966) is a commonly used 13-item scale designed to measure the life satisfaction of elderly individuals. The psychometric properties of this scale were evaluated by Wood, Wylie and Sheafor (1966) and demonstrated to be quite satisfactory.

3. The Subjective Senescence Scale

The subjective senescence scale (Reid & Ziegler, Note 3) is a new measure which was constructed to assess an individual's sense of being old and senescent. In a previous investigation this measure was found to be reliable and some evidence was obtained for its validity. The scale is subdivided into three subscales: a) a perception of abilities scale; b) a perception of age scale; and c) a life satisfaction scale. It was expected that this latter would correlate with the main life satisfaction inventory.

4. Life Events Questionnaire

An eight-item Life Events questionnaire was constructed to identify the number of life changes experienced by the

subject in the preceeding 12 month period. This questionnaire was merely additive and a high score indicates a large number of changes. Three items, of the eight, address the direction of the change (positive or negative) but were excluded from the total score in the analysis.

Procedure

The study was carried out during February and March, 1978. Prospective subjects were approached by one of the trained interviewers, and interviews were conducted on a one-to-one basis. Each interview took approximately one hour to one hour and thirty minutes to complete.

Results and Discussion

The intercorrelations between the four measures are shown in Table 1. As expected, there were high significant intercorrelations between the scales within the reminiscence questionnaire ($p < .01$) and the subscales within the subjective senescence questionnaire ($p < .01$). Also, as expected, there was a significant correlation between the Life Satisfaction Index Z and the life satisfaction subscale in the subjective senescence questionnaire ($p < .001$). In addition, frequency of reminiscence showed a significant positive correlation with the life events questionnaire ($p < .05$) and negative correlations with both life satisfaction indices (Life Satisfaction Index Z $p < .01$; Subjective Senescence Life Satisfaction subscale $p < .05$). Life

Satisfaction Index Z showed significant correlations with the perception of physical condition subscale in the Subjective Senescence questionnaire ($p < .01$) and the senescence subscale in the same index ($p < .01$). The senescence subscale also correlated positively with the functions of reminiscence scale ($p < .05$).

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Insert Table 1 about here

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Significant positive correlations within the reminiscence and senescence questionnaires were expected, and indicate the homogeneity of the measures, as does the correlation between the two life satisfaction indices. The correlations between life satisfaction and the senescence subscales confirm that life satisfaction is firmly linked to health and self-perception in the aged. The major point of interest in these data is the significant negative correlations between frequency of reminiscence and the life satisfaction indices. These indicate that contrary to the Havighurst and Glasser study the subjects are showing a strong negative affect with reminiscence behaviour. The correlation between frequency of reminiscence and life events suggests that changes in circumstance may result in more reminiscence behaviour or, alternatively, that more reminiscence behaviour can result in changes in circumstance. However, since the questionnaire includes

questions on the death of close friends etc., the latter hypothesis is less likely.

Since interscale correlations provide only a very general analysis of the data, each questionnaire was further analyzed for between group differences on mean scores. For most questionnaires the mean scores for each subject were calculated across scale and subscale items and neutral scores were inserted for missing data. The overall percentage of missing data was .05. However, for the functions of reminiscence scale an analysis was also performed by item, since the mean score for the scale indicates the number of functions in use by the subject and the rating per item indicates the use of a particular function. In addition the critical life-review question was not included in the overall mean of the functions of reminiscence scale since it was an important factor in group definition.

After the means for each subject for each scale and subscale were calculated, they were sorted by age (young-old/old-old), and by sex (male/female). The means for these groupings are shown in tables 2 and 3. It should be noted that the two dimensions are not independent. There were a total of 37 subjects in the young-old group of which 10 were male, and a total of 45 subjects in the old-old group of which 13 were male. Across the age groupings there

were 23 males and 59 females. Due to the unequal N's no analysis including both age and sex as factors was attempted.

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Insert Tables 2 and 3 about here

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Since the major focus of the study was the relationship between ego-integrity and adaption to aging (as measured by the life-satisfaction indices) and since mere frequency of reminiscence does not necessarily mean the presence of life review behaviour, the data were further classified into those subjects who were showing life review behaviour and those subjects who were not. The means for the reviewers and the non-reviewers on the four measures are shown in Table 4. Subjects were classified on the basis of a critical item in the functions of reminiscence scale which asked them to rate the extent to which they were engaged in 'thinking back over particularly unhappy times in your life in an effort to understand and accept these events better'.

This definition of life review as a reformulation of negative life events is based upon Butler's definition and Erikson's polarization of integrity and despair in the final stage. It seems that it is the successful reworking and integration of past failures which reduces the present tension and anxiety resulting in personality integration.

An obvious prediction of this assumption is that subjects with a history of adjustment and personal success (such as the subjects in the Havighurst study) may have less need of the adjustive process. In their case, the review of the past may serve other functions than ego-integration, including purely remembering for pleasure or to cope with present problems.

In the present study 42% of the subjects rated themselves as being engaged in life review activity. Out of 37 subjects in the young-old group, 23 (62%) rated themselves as engaged in life review activity; of these six were male. Whereas, of a total of 45 subjects in the old-old group, only 15 (33%) rated themselves as engaged in life review; of these five were male. A Chi-square analysis of expected frequencies confirmed that significantly more of the young-old group were life-reviewing than the old-old group ($\chi^2(1)=7.132, p<.01$). This is in keeping with Butler's prediction that life-review is initiated during the early stages of late adulthood.

Insert Table 4 about here

Subjects not showing life-review behaviour were labelled non-reviewers and analyzed together regardless of

their age. It was tacitly assumed that these subjects had completed their life review process. This assumption cannot be substantiated except by the larger number of the group who are drawn from the old-old group. Any further studies should include some items addressed to past life-review behaviour to validate this assumption.

The frequency of reminiscence subscale is shown in Table 5. A high score indicated a high frequency of reminiscence behaviour. There was no significant difference between age groups ($F(1,80)=.909$, n.s) or between the sexes ($F(1,80)=.679$, n.s), but a significant difference between reviewers and non-reviewers $F(1,80)=12.27$, $p < .001$. The reviewers were indulging in more reminiscence activity than the non-reviewers. This is precisely as Butler would predict, since a decline in reminiscence activity is expected to follow the completion of the process.

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Insert Table 5 about here

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There was no difference for age ($F(1,80)=2.89$, n.s) or sex ($F(1,80)=.81$, n.s.) analyzing the frequency of present and future thought scale (see Table 6), but there was a significant difference for review activity $F(1,80)=10.50$, $p < .001$. Subjects engaged in reviewing were less concerned with the present and future than non-reviewers. It is

possible that a further measure of adaption to aging is the degree of present and future orientation.

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Insert Table 6 about here

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The functions of reminiscence scale is shown in Table 7. There were no significant differences due to age ($F(1,80)=1.48$, n.s.) or sex ($F(1,80)=.04$, n.s.) but a significant difference due to review behaviour $F(1,80)=18.17$, $p<.001$. Those subjects engaged in review were using reminiscence in more ways than those subjects who were not reviewing. This should be taken in consideration with the finding that reviewers were reminiscing more overall than non-reviewers.

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Insert Table 7 about here

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The Life Satisfaction Index Z showed no differences for age ($F(1,80)=.31$, n.s.) but a significant difference for sex ($F(1,80)=9.13$, $p<.05$) and a significant difference for review group ($F(1,80)=5.70$, $p<.05$). The unequal N makes it difficult to perform an analysis using both sex and review group as factors, but it is possible that a significant interaction would result. Thus, over the entire sample males are less satisfied than females, however, this cannot

fully account for the review group differences since males are evenly distributed between the groups. So, it can be concluded that the effect for the review groups is over and above the effect for male/female distinctions. Subjects engaging in life review were less satisfied than those who were not. The analysis of the life satisfaction subscale from the subjective senescence questionnaire (see Table 8) confirms in general this data pattern. There is no difference for age groups ($F(1,80)=1.82$, n.s.) but a difference for sex ($F(1,80)=3.41$) at the .10 level and a difference for review group $F(1,80)=3.98$, $p < .05$.

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Insert Table 8 about here

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The subjective senescence questionnaire for the perception of age (senescence - see Table 9) shows no differences for age ($F(1,80)=.41$, n.s.) nor for sex ($F(1,80)=1.006$, n.s.) or life review group ($F(1,80)=.08$, n.s.) However, the perception of physical abilities scale (see Table 10) shows significant differences for sex $F(1,80)=6.5$, $p < .05$, although no differences for age ($F(1,80)=.31$, n.s.) or for review group ($F(1,80)=.04$, n.s.). This perception of the males that they are physically less able than when they were younger may account for the reduced life satisfaction shown and confirm its independence from the decreased life satisfaction shown by reviewers of both

sexes.

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Insert Tables 9 and 10 about here

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The Life Events questionnaire is shown in Table 11. Analysis showed no differences due to age ($F(1,80) = .37$, n.s.) or to sex ($F(1,80) = .21$, n.s.) or to review group ($F(1,80) = 1.69$, n.s.). However, there was an overall significant correlation between number of life changes and frequency of reminiscence which suggests that changes may have a relationship with frequency of reminiscence but it is not sufficiently systematic to show up in the ANOVA.

In summary, the study supported the hypothesis that the elderly engage in life review behaviour as a way of adjusting to aging and to attain ego integrity. As Butler predicts, reminiscence activity ceases to be as frequent after the review is successfully completed. Subjects continuing review behaviour into the final years may be assumed to have failed to reach a successful resolution. Possible reasons for this failure were not addressed by this study. Concerning the relationship between ego-integrity and life review activity, the data showed marked negative affect during the course of the review, measured by life satisfaction indices and further indicated by less present and future orientation among the reviewers. This, together with evidence from another study (Franklin & Ziegler, Note 3) suggests that levels of anxiety may actually rise during the process and that ego-integrity does not appear until the process is complete.

Footnotes

1. This research was supported in part by a SSHRC grant to David Reid & Michael Ziegler.

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	1	2	3	4	5	6	7	8
1. FREQUENCY OF REMINISCENCE	1.0							
2. PRESENT & FUTURE THOUGHTS	.42**	1.0						
3. FUNCTIONS OF REMINISCENCE	.62**	.40**	1.0					
4. LIFE SATISFACTION INDEX Z	-.35**	-.01	.01	1.0				
5. SUBJECTIVE SENESENCE-PERCEPTION	-.18	.13	.04	.46**	1.0			
6. SUBJECTIVE SENESENCE-AGE	-.02	.20	.21*	.42**	.41**	1.0		
7. SUBJECTIVE SENESENCE-LIFE SAT.	-.25*	-.19	.08	.70**	.42**	.38**	1.0	
8. LIFE EVENTS	.25*	.04	.04	-.09	-.21	-.12	-.12	1.0

* p .05

** p .01

TABLE 1. INTER-CORRELATIONS BETWEEN MEASURES

	YOUNG-OLD	OLD-OLD
FREQUENCY OF REMINISCENCE	2.60	2.4
FREQUENCY OF PRESENT & FUTURE	3.30	3.05
FUNCTIONS OF REMINISCENCE	2.55	2.40
LIFE SATISFACTION INDEX	2.30	2.40
SENESCENCE-PHYSICAL ABILITY	1.50	1.45
SENESCENCE-AGE	2.75	2.70
SENESCENCE-LIFE SATISFACTION	2.95	3.10
LIFE EVENTS	1.15	1.15

Table 2. Means for measures classified by age

	MALE	FEMALE
FREQUENCY OF REMINISCENCE	2.55	2.45
FREQUENCY OF PRESENT & FUTURE	3.25	3.10
FUNCTIONS OF REMINISCENCE	2.50	2.45
LIFE SATISFACTION INDEX	2.20	2.50 *
SENESCENCE-PHYSICAL ABILITY	1.40	1.55 *
SENESCENCE-AGE	2.80	2.65
SENESCENCE-LIFE SATISFACTION	2.90	3.15
LIFE EVENTS	1.10	1.20

* p < .05

TABLE 3. Means for measures classified by sex.

	REVIEWERS	NON-REVIEWERS
FREQUENCY OF REMINISCENCE	2.70	2.20 **
FREQUENCY OF PRESENT & FUTURE	2.92	3.43 **
FUNCTIONS OF REMINISCENCE	2.80	2.20 **
LIFE SATISFACTION INDEX	2.20	2.50 *
SENESCENCE-PHYSICAL ABILITY	1.53	1.54
SENESCENCE-AGE	2.76	2.73
SENESCENCE-LIFE SATISFACTION	3.02	3.20 *
LIFE EVENTS	1.21	1.17

** p < .01

* p < .05

TABLE 4. Means for measures classified by review
behaviour

FREQUENCY OF REMINISCENCE SCALE

1. HOW OFTEN DO YOU THINK ABOUT PAST EVENTS IN YOUR LIFE?
2. DO YOU EVER THINK ABOUT SAD EVENTS FROM YOUR PAST?
3. HOW OFTEN DO YOU DAYDREAM ABOUT THE PAST?
4. HOW OFTEN DO YOU REMEMBER PLEASANT EVENTS FROM YOUR PAST?
5. IS IT UNUSUAL FOR YOU TO THINK ABOUT THE PAST?
6. DO YOU AVOID THINKING ABOUT THE PAST?

TABLE 5. ITEMS 1-5 REQUIRED RATINGS ON A FIVE-POINT SCALE
AND ITEMS 5 & 6 REQUIRED A YES/NO RESPONSE.

FREQUENCY OF PRESENT AND FUTURE THOUGHTS SCALE

1. WOULD YOU SAY THAT THOUGHTS ABOUT THE FUTURE ARE AN IMPORTANT PART OF YOUR EVERYDAY LIFE?
2. HOW MUCH TIME DO YOU SPEND THINKING ABOUT DAY TO DAY EVENTS?
3. HOW OFTEN DO YOU MAKE PLANS FOR THE FUTURE?
4. HOW OFTEN DO YOU THINK ABOUT UPCOMING EVENTS?
5. HOW OFTEN DO YOU THINK ABOUT WHAT MIGHT HAPPEN TO YOU IN THE FUTURE?
6. HOW OFTEN DO YOU THINK ABOUT THE FUTURE?
7. WOULD YOU SAY THAT THOUGHTS ABOUT THE PRESENT ARE AN IMPORTANT PART OF YOUR EVERYDAY LIFE?
8. HOW OFTEN DO YOU THINK ABOUT EVENTS CURRENT IN YOUR LIFE?

TABLE 6. ALL ITEMS WERE RATED ON A FIVE-POINT SCALE

FUNCTIONS OF REMINISCENCE SCALE

1. HOW OFTEN DO YOU RECALL THE PAST IN ORDER TO ENCOURAGE GREATER RESPECT FOR YOUR AGE AND EXPERIENCE WHEN YOU ARE TALKING TO SOMEONE YOUNGER?
2. HOW OFTEN DO YOU THINK ABOUT YOUR PAST IN ORDER TO HELP YOU SOLVE CURRENT PROBLEMS?
3. HOW OFTEN DO YOU THINK ABOUT THE PAST FOR PERSONAL ENJOYMENT AND SATISFACTION?
4. HOW OFTEN DO YOU THINK ABOUT THE PAST AS A WAY TO HELP YOU DEAL WITH PRESENT STRESSFUL SITUATIONS?
5. HOW OFTEN DO YOU THINK BACK OVR PARTICULARLY UNHAPPY TIMES IN YOUR LIFE IN AN EFFORT TO UNDERSTAND AND ACCEPT THOSE EVENTS BETTER?
6. HOW OFTEN DO YOU USE YOUR RECOLLECTIONS OF THE PAST TO HELP CREATE GREATER UNDERSTANDING BETWEEN YOURSELF AND SOMEONE YOUNGER?
7. HOW OFTEN DO YOU USE YOUR RECOLLECTIONS TO PROVIDE YOUNGER PERSONS WITH THE KNOWLEDGE YOU HAVE GAINED THROUGH PAST EXPERIENCE
8. HOW OFTEN DO YOU USE YOUR REMEMBRANCES TO PROVIDE ENJOYMENT FOR OTHERS?

TABLE 7. ALL ITEMS WERE RATED ON A FIVE-POINT SCALE

SUBJECTIVE SENESENCE-LIFE SATISFACTION

1. WOULD YOU SAY THAT YOU LEAD A HAPPY LIFE OR ONE WHICH SEEMS BORING AND UNHAPPY?
2. HOW MUCH OF THE TIME DO YOU FEEL BORED?
3. WHEN YOU BEGIN THE DAY, DO YOU GENERALLY ANTICIPATE THAT IT WILL BE SATISFACTORY?
4. HOW OPTIMISTIC OR PESSIMISTIC ABOUT YOUR LIFE WOULD YOU SAY YOU ARE?
5. WITH RESPECT TO WHEN YOU WERE 40 HOW OUTGOING WOULD YOU SAY YOU ARE NOW?
6. WITH RESPECT TO WHEN YOU WERE 40 HOW CONTENT WOULD YOU SAY YOU ARE NOW?

TABLE 8. ITEM 1 REQUIRED A YES/NO RESPONSE. ITEM 2 WAS RATED ON A SCALE OF 1-6. ITEM 3 WAS RATED ON A SCALE OF 1-4. ITEM 4 WAS RATED ON A SCALE OF 1-5 AND ITEMS 5 & 6 WERE RATED ON SCALES OF 1-3 (MORE-THE SAME-LESS).

SUBJECTIVE SENESENCE-SENESCENCE

1. HOW OLD WOULD YOU SAY YOU FEEL COMPARED WITH OTHERS OF YOUR AGE?
2. DO YOU THINK OF YOURSELF AS OLD?
3. WOULD YOU SAY THAT YOUR LIFE IS LARGELY COMPLETED OR ARE THERE NEW GOALS BEFORE YOU?
4. WOULD YOU SAY THAT THERE IS NO REAL DIFFERENCE BETWEEN YOURSELF AND PERSONS 30 YEARS YOUNGER?

TABLE 9. ITEM 1 WAS RATED ON A 7-POINT SCALE (OLDER-YOUNGER). ITEM 2 REQUIRED A YES/NO RESPONSE. ITEM 3 WAS RATED ON A THREE-POINT SCALE AND ITEM 4 REQUIRED A YES/NO RESPONSE.

SUBJECTIVE SENESENCE-PHYSICAL ABILITIES

1. CAN YOU DO AS MUCH AS YOU EVER COULD?
2. DO YOU DEPEND ON OTHERS, SUCH AS YOUR FAMILY, TO PROVIDE YOU WITH TRANSPORTATION?
3. DO YOU SEE YOURSELF AS LEADING AN INDEPENDENT LIFE?

COMPARED WITH WHEN YOU WERE 40

4. WITH RESPECT TO HEALTH WOULD YOU SAY YOU ARE HEALTHIER?
5. WITH RESPECT TO SPEED WOULD YOU SAY YOU ARE QUICKER?
6. WITH RESPECT TO ACTIVITY WOULD YOU SAY YOU ARE MORE ACTIVE?
7. WITH RESPECT TO ENERGY WOULD YOU SAY YOU HAVE MORE ENERGY?

TABLE 10. ITEMS 1-3 REQUIRED YES/NO RESPONSES. ITEMS 4-7 WERE RATED ON A 3-POINT SCALE (MORE-THE SAME-LESS).

LIFE EVENTS QUESTIONNAIRE

1. HAVE THERE BEEN ANY CHANGES IN YOUR HEALTH DURING THE LAST 12 MONTHS?
2. DID THESE CHANGES RESULT IN BETTER OR WORSE HEALTH?
3. HAVE THERE BEEN ANY CHANGES IN YOUR PLACE OF RESIDENCE IN THE LAST 12 MONTHS?
4. HAVE THESE CHANGES BEEN FOR BETTER OR WORSE?
5. HAVE THERE BEEN ANY CHANGES IN YOUR INCOME DURING THE LAST 12 MONTHS?
6. HAVE THESE CHANGES BEEN FOR BETTER OR WORSE?
7. DURING THE LAST 12 MONTHS HAVE YOU LOST ANY ONE YOU FELT CLOSE TO THROUGH DEATH?
8. DURING THE PAST 12 MONTHS HAVE YOU BEEN SEPARATED FROM ONE OR MORE CLOSE RELATIVES?
9. DURING THE PAST 12 MONTHS HAVE YOU HAD TO STOP ANY ACTIVITIES WHICH WERE IMPORTANT TO YOU?

TABLE 11. ITEMS 1, 3, 5, 7, 8, AND 9 REQUIRED YES/NO RESPONSES AND ITEMS 2, 4, AND 6 REQUIRED BETTER/WORSE RESPONSES.